IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gore, et al. Confirmation No. 4274

Serial No. : 10/007,164 Examiner: Divecha, Kamal B.

Filed: November 30, 2001 Art Unit: 2151

For: END-TO-END PERFORMANCE TOOL AND METHOD
FOR MONITORING ELECTRONIC-COMMERCE TRANSACTIONS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION TO OVERCOME A CITED PUBLICATION
(37 C.F.R. § 1.131)

1.   The persons making this declaration are Richard GORE, Joshua WILMES, and Alan CONLEY, representative inventors of the above-referenced U.S. Patent Application No. 10/007,164 ("Application").

2.   Certain claims of the present Application are currently rejected in view of certain references, *inter alia*, under 35 USC §103(a) in view of U.S. Patent Publication No. 2003/0074606 A1 (Boker). Boker has an effective filing date in the United States of September 10, 2001.

3.   Actual reduction to practice of the invention that is the subject of the claims in the present application occurred in this country at least before September 10, 2001. Namely, a working model of the entire claimed invention was built and functioning at least before September 10, 2001.

4.   An invention submission form that was submitted by the inventors to the assignee Cisco Systems, Inc. on January 21, 2001 corroborates and otherwise demonstrates
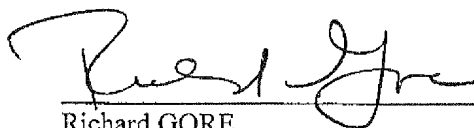
the correctness of the declaration that the working model of the entire claimed invention was built and functioning at least before September 10, 2001. *See* Exhibit A, at least page 4, line 7-8. Certain confidential portions of the invention submission form, such as email addresses, have been redacted.

5. A copy of an email sent between the inventors on April 2, 2001 further corroborates and otherwise demonstrates the correctness of the declaration that the working model of the entire claimed invention was built and in operation at least before September 10, 2001. The email shows, amongst other things, that during April 2001 the inventors were assigning a person to draft a user manual of the working model for customer consumption and to conduct a walk-through demonstration of the working model to customers. *See* Exhibit B, at least page 1, lines 34-41. Certain confidential portions of the copy of the email, such as email addresses, have been redacted.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.
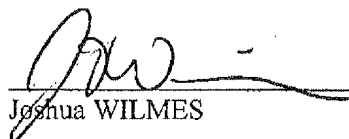
Dated: May 1, 2007

Richard GORE

Dated: May 1, 2007

Joshua WILMES

Dated: MAY 1, 2007

Alan CONLEY

Idea Details (#111868)

Search

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End to end performance tool and method for monitoring electronic-commerce transactions

CPOL No.: 111868 | **Seq No.:** 4117 | **Status:** Pending | **Submitted:** 21-Jan-2001 | **Modified:** 02-Mar-2007

Portfolio Manager

Idea Details

Inventors: Email Invento

Richard Gore
Type: Regular

Joshua Wilmes
Type: Regular

Alan Conley
Type: Regular
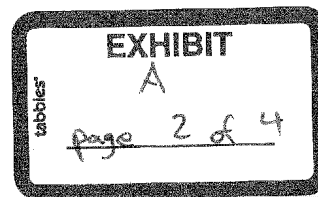
Mehrdad Pirouz   *Employee has left Cisco.*

Background: The End to End Performance Tool is used to distinguish performance
bottlenecks for select customers. This tool gives objective end-to-end
performance metrics of CCO customers' E-commerce transactions.
It tracks two measurements: (1) the Internet delay from selected CCO customers'
sites to Cisco, and (2) the IPC (e-commerce) Application delay, and presents this
data over time.

This tool is designed to help identify the exact nature of the response time
latency. Currently, the IPCJ-OT (New Ordering Tool) application is being monitored
with this tool. However, many applications can be added to this tool and can be
used in the same way.

To our knowledge, there is no tool that is designed to monitor and accurately
identify customers' performance latencies. The End to End Monitoring tool monitors
and represents customers both by customer name and by theater. This tool is unique
in that we can offer our customers additional information about the exact location
of their performance delays. This information is highly valuable because we can
pinpoint the time, nature, and location of application vs. Internet latencies.
This information is, ultimately, going to be used to help identify solutions and
improve overall customer experience for our customers.

Possible Prior Art: ---

Summary: The End to End Performance Tool is used to distinguish performance
bottlenecks for select customers. This tool gives objective end-to-end
performance metrics of CCO customers' E-commerce transactions.
It tracks two measurements:
(1) the Internet delay from selected CCO customers' sites to Cisco, and the
(2) Ordering Tool (E-commerce) Application delay

This data is presented over time. Data is kept on a four week rolling average for
network latency from CCO to the customer-provided URL and for the internal
application being monitored.
The E2E Tool determines connectivity to the configured customer sites by using a
"HTTP HEAD" request to their web server. Alternatively, it may use a simple ICMP
"ping" to their site.
This monitoring is performed by the standard EMAN application monitor, and is thus
has a configurable polling rate and timeout criteria. (Typically sites are polled
once every 30 seconds)

Since both the internet and the CCO servers experience load which varies depending
on the time of day and day of week, direct comparison of performance of the network
or application's absolute response time is not necessarily useful. This tool
therefore develops baselines over a period of weeks to characterize what response
time is typical for a particular time of day and time of week. It then compares
measured response times against these baseline values and allows users to see
periods of both poor performance (absolute response time) and unusually poor
performance (response time as a percentage of the baseline for that time of day and
day of week).

The ability to combine absolute measurement of CCO application performance and of
network performance between Cisco and its customers against typical values
(baselines) is key to the usefulness of this tool. This ability sets it apart from
simple network availability monitoring by enabling users to, at a glance,
differentiate "normal" behavior from "abnormal" behavior.

The second phase of the End to End tool includes an automated traceroute facility. This performs and stores traceroutes in addition to the existing HTTP and ICMP monitoring and stores these traceroutes in a database for later retrieval. This traceroute data is encoded and ranked based upon several criteria.

1. Hop Count
2. Total RTT for all Hops
3. Maximum RTT for any Hop
4. RTT of the last hop
5. Sum of the absolute deviations of the RTTs for each hop
6. Number of "errors" (no response, host unreachable, etc)
7. "Traceroute Index" (This is a value which is computed as a weighted product of several of the other metrics and is intended to be a numeric indicator of the "goodness" of a particular traceroute as compared to others to this same destination host. It is a relative measure only.
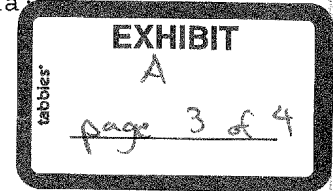
This data is then linked into the existing response time graphs such that the user may click on the graph to view the closest traceroute to that point in time. This is intended as a method for users to identify the cause of the degredation which was measured at that time. Traceroutes may be graphed based upon the numeric values mentioned above and they may be viewed in detail to show all hops and their response times.

Traceroutes are also baselined based upon the "traceroute index" mentioned above so that a "representative worst and best case" traceroute is available for each baselining interval throughout the week. This is a valuable tool for identifying in what way a particular period of poor performance is different from one of good performance.

Restatement: ---

Advantages: This solution can not only detect response time latencies, but it can also identify the exact location of the performance latency. This data is presented over time. Data is kept on a four week rolling average for network latency from CCO to the customer-provided URL and for the internal application being monitored.

An easy-to-interpret graphical representation shows us whether the Internet connection to the customer, or the Application, was performing unusually poorly or well at any given time. It highlights a difference from the norm, and allows you to determine whether the Internet connection, or the Application, or both, were performing unusually worse or better than expected at any given time. Once a problem period is identified, the data may be viewed in several other ways (absolute network and performance response times, times vs. the baselines, and traceroute data) which help in identifying the cause of poor performance for a particular customer.
Additionally, no client or monitoring agent installation is required on the customer's computer, server or network. Performance is monitored with the customers' complete permission/collaboration and, therefore, the level of imposition on the customer is very minimal.

First Written Record URLs: ---

Cisco Use: ---This tool gives objective end-to-end performance metrics of CCO customers' E-commerce transactions. The tool is designed to help Customer Service Tier 1 and 2 support people to identify the source of a customer's CCO problem when a customer has called in with an inquiry or complaint.
Future priorities include having a secured version of the tool available to all Tier 1 Customer Service representatives. This secured version would be an easy-to-interpret representation of whether the problem is an application or Internet issue. This will be highly beneficial because customer representatives can immediately respond to our customers' inquiries. This will not only reduce costs by

reducing the numbers of calls that are escalated to Tier 2 and Tier 3 support, but it will also increase customer satisfaction.

Working Model: ------

Industry Use: Description of possible uses of the technology by others in the industry:

Public Use: ---The product has not been offered for sale or used outside of Cisco. We have used this tool for select customers, but only the core End to End team has used this tool.

Government Use: ---

Detecting Use: Cisco can regularly review publicly available solutions to determine if similar features are offered. Customer reports of similar offerings from other companies may offer visibility into those proprietary solutions.

Standards: ---

Technologies:
- IP > IP Application Services
- Quality of Service (QoS) > QoS Congestion Management (queueing)

Networking Solutions:
- Large Enterprise > Networking Solutions for Large Enterprise > Network Management Solutions for Large Enterprise
- Large Enterprise > Networking Solutions for Large Enterprise > Content Networking Solutions for Large Enterprise

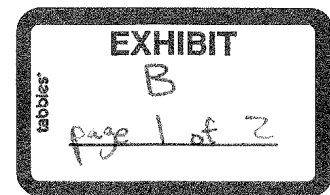**Categorization Notes:**

Categories Summary
[CO] [IN] [NM/NA]

EXHIBIT
A

tabbies®

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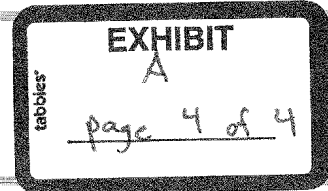
PDDs: ---

Supporting Documents:

- ---

Documents:

Notes: Please contact our team for additional documentation, project plans, presentations, and any other information on this tool.

Return-Path: rgore
Delivery-Date: Mon Apr 2 11:35:12 2001
Received: from diablo,
        by jwilmes
        for <jwilmes
Received: from rgore
diablo.cisco.com
2 Apr 2001 11:35:04 -0700 (PDT)
Message-Id:
X-Sender: rgore
X-Mailer: QUALCOMM Windows Eudora Version 4.3.2
Date: Mon, 02 Apr 2001 11:42:16 -0700
To: Jay Smith   Patricia Justusson
        Stephen Estes   ·, Josh Wilmes
From: Rich Gore
Subject: CCO End to End Performance - Status / Closure meeting 4/24
Cc: Ami Tank   , Victor Alejandro
        Nathan Terry ·   ·, Alan Conley
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed
Content-Length: 1797

<div class="moz-text-flowed" style="font-family: -moz-fixed">Hi, all -

I've scheduled a meeting on 4/24 (hey, it was the only time to get even
half of you in a room!).

I'd like to

(1) get some last status on the CCO Performance monitoring tool / project, and
(2) see what we need to do to close it out (or at least put it in
mothballs until we get funding to continue)

In. re. status, I'm assuming that
(a) the Phase 1 (high level app / network tracking) will continue to be
supported, and that
(b) the Phase 2 (auto traceroute) feature will work once dbinsert (is that
correct?) is installed and working.

In re. what's needed to do to close it out - I think there's only 3 things
that need to take place, still:
(a) writing the administrator's manual, describing what needs to be done to
administer the tool;
(b) writing the user's manual, describing how the user will use the tool to
gather info; and
(c) handing this info off to the customer with a training walk-through of
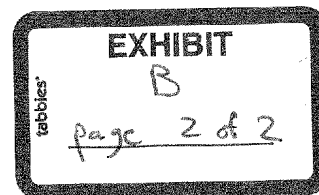the admin tools and user tools.

Problem with the above "what needs to be done list":
        Mehrdad is gone. Stephen Estes and I (Rich Gore) are being pulled
out of the loop and onto other projects with great speed.
        We need to discuss who can pick up the above tasks. Possible options
are (a) Nathan Terry, (b) Jay Smith and/or Ami Tank. Both would require
some help from Rich and Stephen and Josh. Another possible option is (c)
it just doesn't get done; and we let the traceroute tool gather dust until
we get more funding.

At any rate, this whole issue needs discussion and closure. So let's get
together on the 24th, and figure out how to close it out.

(Jay - I can call into you. Do we need a bridge set up? Is there anyone
other than Jay who cannot get to 12/1 at noon on the 24th? If so, let me
know and I'll set up a bridge.)

- Rich

</div>